FRI0319 PREDICTORS OF COMPLETE REMISSION IN POLYMYALGIA RHEUMATICA

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Background: Polymyalgia rheumatica (PMR) is an inflammatory rheumatic condition characterized by aching and morning stiffness in the shoulders, hip girdle, and neck that typically occurs in adults over the age of 50. A rapid resolution of symptoms with low-dose glucocorticoids is a feature of PMR although some patients may experience a disease flare-up during steroid tapering.
Objectives: The aim of the study was to investigate possible clinical or laboratory prognostic factors of remission during a 12 month follow up in PMR patients treated with a starting low prednisone dose following the 2015 ACR-EULAR guidelines(1).
Methods: From 86 consecutive outpatients, diagnosed with PMR following ACR/EULAR 2012 provisional clinical criteria for PMR(2), 79 patients (56 women and 23 men), that achieved a complete follow up of at least 12 months, were selected. Clinical evaluation and laboratory tests were performed every 3 months Clinical remission was defined as lack of shoulder and hip girdle pain and as levels of ESR≤40 mm/h and CRP≤0.5 mg/dl.
Results: 37 PMR patients reached a complete remission after twelve months follow-up. We didn't find any significant difference in the mean age and in ESR and CRP values at the beginning of the disease in patients in remission after 12 month of follow up when compared with patients not in remission. Presence of obesity, dyslipidemia, hypertension, diabetes and smoking habits were not significantly different in the two groups of patients. No significant difference in steroid therapy at the beginning and after 6 month of follow up was noted between the two groups of patients. A statistically significant female low clinical remission was seen at the end of 12 month follow up when compared with male complete clinical remission (33.9% versus 78.2%, p=.000) Moreover it was shown that the patients achieving clinical and laboratory remission after six months of therapy were also those who maintained remission at the 12 month. CRP values, instead of ESR ones, were more predictive of remission after one year of therapy. Therefore patients with clinical remission in the absence of normalization of CRP value had greater risk of exacerbation.

Table 1. Demographic and laboratory characteristic of patients

	Remission T12	Non responders T12	p.
Age	75.1±6.7	69.7±5.7	ns
N°	37	42	
Female	19	37	.000
ESR T0 (mm/h)	56±31.6	50.2±29.4	ns
CRP T0 (mg/dL)	3.3±3.3	3.8±4.2	ns
ESR T6 (mm/h)	24.3±16.2	29.9±20.4	ns
CRP T6 (mg/dL)	0.6±0.7	1.5±2.1	.01
ESR T12 (mm/h)	22±15.4	28.7±17.4	ns
CRP T12 (mg/dL)	0.2±0.2	1±0.8	.000
Remission T6	27	7	.000
Prednisone dosage (mg) T0	16.3±8.4	15.5±6.6	ns
Prednisone dosage (mg) T6	5.9±4.8	7.5±5.1	ns
Prednisone dosage (mg) T12	2.3±2.5	4.4±4.7	.04
Dyslipidemia	9	12	ns
Hypertension	21	21	ns
Obesity	9	8	ns
Diabetes	6	8	ns
Smokers	3	3	ns

T0: Baseline; T6: Six months of follow up; T12: One year of follow up; ESR: erythrocyte sedimentation rate; CRP: C-Reactive Protein.

Conclusions: The sixth month of therapy is a crucial target for the management of PMR, because it can help to identify patients at greater risk of exacerbations, which may benefit from a tighter follow-up and a more aggressive therapeutic strategy. Among prognostic factors female sex and high CRP values at sixth months appear to be associated with higher relapse risk and a longer duration of treatment.

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FRI0320 PREDICTIVE VALUE OF PLATELET TO LYMPHOCYTE RATIO IN RENAL INVOLVEMENT IN PATIENTS WITH GRANULOMATOSIS WITH POLYANGIITIS

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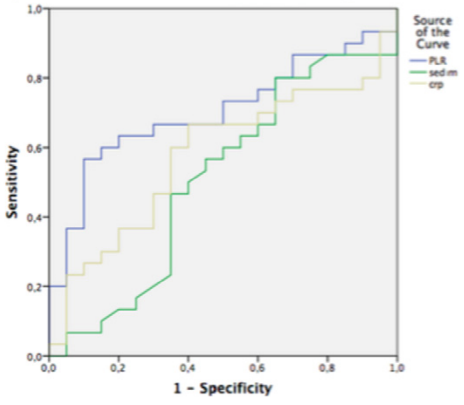
Background: Granulomatosis with polyangiitis (GPA) is a granulomatous necrotizing vasculitis with high morbidity and mortality. Anti-neutrophil cytoplasmic antibody (ANCA) is a rvaluable diagnostic marker, however its titer lacks predictive value for the severity of organ involvement. Platelet to lymphocyte ratio (PLR) and mean platelet volume has been regarded as a potential marker in assessing systemic inflammation.
Objectives: We aimed to investigate PLR and MPV as inflammatory marker in patients with GPA.
Methods: GPA patients and age-sex matched healthy controls were included. Demographic, clinical and laboratory information were extracted from medical records. Erythrocyte sedimentation rate (ESR), C-reactive protein (CRP), white blood cell (WBC), platelets (PLT), lymphocyte and neutrophils counts and glomerular filtration rate (GFR) were recorded. PLR was calculated. Disease activity was assessed with Birmingham Vasculitis Activity Score for WG vasculitis (BVAS/WG).
Results: 56 patients with GPA and 53 healty controls were included. Clinical characteristics and laboratory findings of the study population are shown in Table 1. ESR, CRP, MPV and PLR were significantly higher in patients with GPA than controls. PLR positively correlated with ESR and CRP (r:0.389, p:0.005 and r:0.512 p<0.001, respectively). In contrast, MPV negatively correlated with ESR and CRP (r:-0.308, p:0.028 and r:-0.337 p:0.014, respectively). There were no significant correlation between PLR, MPV and BVAS/WG. Patients with renal involvement had statistically significantly higher PLR than patients without renal involvement (303.01±287.33 vs177.98 + 75.43, p: 0.020 respectively). Moreover PLR negatively correlated with glomerlar filtration rate (r:-0.266 and p:0.009). Receiver operating characteristic curve of PLR, ESR and CRP for differentiating renal involvement is presented in Figure 1. Area Under Curves (AUCs) for PLR, CRP and ESR were 0.703 (95% confidence interval [CI], 0.558–0.849, p=0.016), 0.577 (95% CI: 0.416–0.738, p=0.362), 0.508 (95% CI: 0.337–0.678, p=0.929), respectively. The cutoff level of PLR was 204 (sensitive 65.6%, specifity 62.5%, positive predictive value 70%, negative predictive value 57.7%). Patients with alveolar hemorrhage tended to have higher PLR but this difference did not reach statistically significance (266.60 + 182.90 vs 240.61 + 252.43 p=0.382, respectively).
Conclusions: Results suggest that PLR exhibit favorable diagnostic performance in predicting renal involvement in patients with GPA.

Table 1. Clinical characteristics and laboratory findings of the patients and healthy controls

	GPA patients	Controls	p value
Age (years)	48.14 ± 14.09	46.77 ± 14.14	0.614
Males (n)	33 (58.9%)	26 (49.1%)	0.034
WBC (x 10^3/uL)	12359.96 ± 6604.92	7230.80 ± 1630.33	<0.001
Neutrophils	9267.74 ± 5701.73	4285.73 ± 1597.18	<0.001
Lymphocytes	1805.64 ± 986.24	2311.22 ± 581.93	<0.001
Platelets	343640 ± 174905.10	234939.02 ± 57204.24	<0.001
ESR	54.19 ± 35.42	10.12 ± 7.66	<0.001
CRP	64.18 ± 72.11	3.42 ± 1.59	<0.001
MPV	7.73 ± 0.96	8.76 ± 1.10	
PLR (mean +SD)	253.99 ±	104.79 ± 25.23	<0.001

Figure. ROC curve of PLR, ESR and CRP for differentiating renal involvement



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FRI0321 CIRCULATING IL-6 AND OTHER METABOLIC BIOMARKERS COMPARING EFFECTS OF MODIFIED-RELEASE PREDNISONE (MR) AND IMMEDIATE-RELEASE PREDNISOLONE (IR) IN NEW GCA

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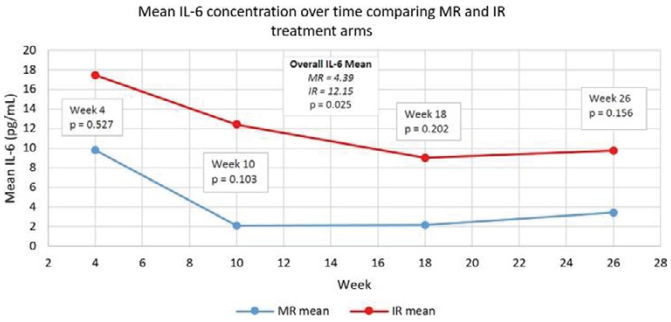
Background: GCA may be an interleukin-6 (IL-6) driven disease and IL-6 blockade is emerging as an exciting therapy of IL-6.[1] We measured serial IL-6 levels in new patients with GCA treated in an RCT of modified-release prednisone (MR) versus immediate-release prednisolone (IR) used in a tapering regimen conforming to BSR guidelines.[2,3]
Methods: Patients (n=12) were randomised into two treatment arms (7 MR, 5 IR) and followed up over 26 weeks. IL-6 samples were collected at 9am at weeks 4, 10, 18 and 26 and were measured using Beckman Coulter IL-6 immunoassay, validated in a controlled study according to ACB criteria. We also measured bone markers (CTX, P1NP, vitamin D), HbA1c, cortisol, ACTH and PTH.
Results: Significantly higher overall mean IL-6 levels were seen in the IR arm (n=5) compared to MR (n=7) [unpaired two-tailed Student's t test]. IL-6 levels in both arms were lowest between weeks 4–10 and continued to decrease in the IR arm to week 26, whereas lower but constant levels were seen in the MR arm (Figure)
Mean CTX concentration was significantly higher at week 4 (M =0.29, SE =0.04) compared to Week 26 (M =0.13, SE =0.02) p=0.002. No significant difference was seen between treatment arms.
Patients on MR had complete suppression of ACTH compared to IR ($p<0.05$) without a significant difference between groups in 9 am cortisol levels (p=0.3412). No significant differences were seen in levels of vitamin D, calcium, PTH, ESR, CRP, or HbA1c.



Conclusions: Our study suggests that elevated levels of Il-6 are better suppressed by MR prednisone therapy compared to IR prednisolone in new GCA. Bone resorption marker CTX was significantly reduced in both treatment arms. ACTH suppression with MR prednisone may reflect a greater impact on the HPA axis although cortisol levels were not affected.
Our findings suggest that MR prednisone may warrant further clinical trial investigation in GCA.
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FRI0322 ASSESSMENT OF DAMAGE AND PROGNOSIS IN PATIENTS WITH ADULT IGA VASCULITIS: RETROSPECTIVE MULTICENTERED COHORT STUDY

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Background: IgA Vasculitis is a leukocytoclastic vasculitis involving small vessels with depositions of immune complexes containing IgA. There is limited data for the prognosis of adult IgA Vasculitis, with also no damage assessment.
Objectives: We aimed to evaluate the clinical characteristics, treatment, outcome and damage of patients with adult IgA Vasculitis.
Methods: We assembled a retrospective cohort of patients with adult IgA Vasculitis, from tertiary Rheumatology Centers in Turkey. All data were abstracted from medical records. Birmingham Vasculitis Activity Score (BVAS),prognostic Five Factor Score (FFS) and vasculitis damage index (VDI) were calculated.
Results: The study included 52 (male/female:40/12) patients with adult IgA Vasculitis. The mean age was 42.2±17 years. Infection history within 6 weeks before presentation was present in 22 (42.3%) patients (18 upper respiratory tract,3 gastrointestinal and 1 urinary tract). Cutaneous manifestations were the most common clinical manifestations (Table 1). All patients were treated with oral glucocorticoids (GC).As additional immunosuppressive agents, azathiopirine was given to 21 (40.4%) and pulse cyclophosphamide to 11 (21.2%) patients. Twenty-eight patients (53.9%) had follow-up of 28.6 months. Five (17.8%) patients relapsed during follow-up. While 3 relapses were major, 2 of them were minor relapses. At the last visit, disease status was evaluated as active or treatment failure by the treating physician in 6 (21.4%) patients. Mortality was 3.6% (n=1) during follow-up, due to pneumonia. The mean VDI score was 0.6 in the last visit. Nine (32.1%) patients had at least one damage item at the end of follow-up period.

Table 1. Clinical characteristics of patients with adult IgA Vasculitis

	Adult IgA Vasculitis (n=52)
Laboratory parameters	
Erythrocyte Sedimentation Rate (mm/hour)*	32.7±22
C-reactive protein (mg/l)†	25.2 (1–94.9)
Proteinuria (>300mg/24 hours)	28 (53.9%)
Creatinine (mg/dl)*	0.9±0.4
Clinical Manifestations, n/52 (%)	
Fever	7 (13.5%)
Weight loss	14 (26.9%)
Myalgia/Weakness/Leg tenderness	24 (46.2%)
Arthritis and/or arthralgia	46 (88.5%)
Neurologic manifestations	1 (1.9%)
Testicular pain or tenderness	3 (5.8%)
Recent onset or severe hypertension	2 (3.8%)
Cutaneous Manifestations	48 (92.3%)
Gastrointestinal manifestations	39 (75%)
FFS=0	29 (55.8%)
FFS=1	15 (28.8%)
FFS≥2	8 (15.4%)
BVAS score at diagnosis*	4.1±1.7

FFS: Five Factor Score, BVAS: Birmingham Vasculitis Activity score. *Mean ± SD; †Median (Minimum–maximum.)

Conclusions: Our results showed that approximately one fifth of patients with adult IgA Vasculitis had relapses during follow-up. At the end of follow-up, one third of patients had at least one damage item. Although, 45% of patients had FFS≥1, the mortality rate was observed to be low in the present study.
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FRI0323 COMPARISON OF BIOPSY PROVEN GIANT CELL ARTERITIS IN NORTH AMERICA AND SOUTHERN EUROPE: A POPULATION-BASED STUDY

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Objectives: To compare clinical characteristics, treatment, long-term follow-up and prognosis of two population-based cohorts of patients with biopsy-proven giant cell arteritis (GCA) from Olmsted County, Minnesota, USA (Olmsted cohort) and the Reggio Emilia area, Northern Italy (Reggio cohort).
Methods: All patients residing in Olmsted County and the Reggio Emilia area